Page 38, amend the paragraph beginning at line 3 as follows:

During the traceback procedure, starting ~~a starting~~ state determiner 1105 picks the starting state, which can be based on the state metrics $p_{k,w}(S)$. ~~$P_{k,W}(s)$.~~ Traceback circuit 1103 ~~1105~~ follows the sequence back through the comparison results stored in memory in traceback circuit 1103. The earliest TB/2 symbols, which result in the earliest states, are written into last-in-first-out ~~(LIFO)~~ buffer 1104. The new comparison results are stored in the memory locations previously occupied by the outputted results.

Page 38, amend the paragraph beginning at line 13 as follows:

Traceback circuit 1103 determines the optimum sequence of symbols based on the state metrics $p_{k,w}(S)$ stored ~~$P_{k,W}(s)$stored~~ in starting state determiner 1105. Starting state determiner 1105 initializes the traceback procedure by setting a starting sequence.

Page 38, amend the paragraph beginning at line 26 as follows:

When the channel ISI length δ is large, or if the transmitted symbol alphabet size A is large, the above method of full sequence estimation becomes impractical at high symbol rates. Full sequence estimations require the implementation of A^{δ} states in the detector. Accordingly, equalizer ~~an equalizer~~ 1110 can provide pre-equalization by preprocessing the input samples $y_{k,w}$ ~~samples $y_{k,w}$~~ in order to reduce the number of ISI symbols to be processed by sequence detector 1100. Equalizer 1110 can be any equalizer that reduces the number of ISI symbols. Again, for purposes of example, assume that the channel input alphabet size is A=5, i.e., ~~i.e.~~ {A}={+2, +1, 0, -1, -2}, and that the reduced ISI length (as seen by the sequence detector) is δ'=1. As before, the technique is applicable to larger alphabets and may accommodate more than one interfering symbol in the reduced length.

All previous changes to the preceding paragraphs are indicated in the above version of those paragraphs.

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Enclosed to replace pages S12 and S36 of the substitute specification are respective replacement pages R12 and R36 that incorporate all the preceding revisions to the specification. The letter "R" is utilized at the beginning of replacement page numbers R12 and R36 to help distinguish them from page numbers S12 and S36 of the substitute specification. To facilitate printing of the patent, replacement pages R12 and R36 can simply be substituted for pages S12 and S36 in the substitute specification.

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